



seven of its Ka-band licenses to its affiliate, PanAmSat.<sup>4</sup> In October 1997, the Bureau established a second processing round (“Second Round”), inviting interested parties to file applications on or before December 22, 1997 for consideration in this round. The Second Round GSO licenses and, in one case, reservation of orbit locations for a non-U.S. licensed satellite system, will enable new entrants to offer services competitive with those licensed in the First Round and will allow First Round licensees an opportunity to expand and improve the capabilities and service offerings of their licensed systems.

3. PanAmSat is a publicly held company of which Hughes Communications, Inc. (“Hughes”) owns 81 percent. In this processing round, PanAmSat proposes to integrate its Ka-band satellites with its existing PanAmSat and Galaxy satellite systems to provide commercial television and radio distribution, teleconferencing, video backhaul and high speed image transmission among other services.<sup>5</sup> In its application, PanAmSat proposes to collocate its Ka-band satellites with existing or proposed C/Ku-band hybrid satellites at the following locations: 43° W.L., 45° W.L., 169° E.L., 166° E.L. 68.5° E.L. and 72° E.L.<sup>6</sup>

4. PanAmSat proposes to use spectrum in the 28.355-28.595 GHz and 29.510-29.990 GHz frequency bands for uplink (Earth-to-space) communications and spectrum in the 18.555-18.795 GHz and 19.710-20.190 GHz frequency bands for downlink (space-to-Earth) communications.<sup>7</sup> PanAmSat also requests authority to conduct its tracking, telemetry and command during transfer-orbit operations in the extended C-band frequencies. PanAmSat informs the Commission that it also intends to operate inter-satellite links.<sup>8</sup>

5. TRW, Inc. (“TRW”) filed a partial petition to deny PanAmSat’s applications. TRW asserts that PanAmSat and Hughes, which are under common control, should not be assigned additional Ka-band orbit locations in regions where they individually or collectively have three or more slots, or in regions where the demand for orbit locations by the second round applicants exceeds the number of locations available.<sup>9</sup> Similarly, Lockheed Martin Corporation suggests that the Commission limit PanAmSat and Hughes from obtaining additional locations that reach the contiguous United States (“CONUS” locations).<sup>10</sup>

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<sup>4</sup> In the First Round, PanAmSat Licensee Corporation, an affiliate of PanAmSat, was authorized to construct, launch and operate two GSO FSS satellites at the 58° W.L. and 125° W.L. orbital locations. Subsequently, however, the International Bureau cancelled PanAmSat Licensee Corporation’s First Round authorization for these orbit locations for failure to meet a mandatory implementation milestone. *See PanAmSat Licensee Corp., Application for Authorization to Construct, Launch and Operate a Ka-band Communications Satellite System in the Fixed-Satellite Service at Orbital Locations 58° W.L. and 125° W.L.*, Memorandum Opinion and Order, 15 FCC Rcd 18720 (Int’l Bur. 2000), *aff’d* FCC 01-178 (rel. May 25, 2001).

<sup>5</sup> PanAmSat Corporation, Application for Authority to Launch and Operate Satellites in the Ka-band, File Nos. SAT-LOA-19971222-00223/228 (“PanAmSat Application”), at 1.

<sup>6</sup> PanAmSat Application at 1. PanAmSat subsequently amended its list for preferred orbital locations to 125° W.L., 58° W.L., 45° W.L., 68.5° E.L., 72° E.L. and 166° E.L. *See* Letter to Magalie Roman Salas, Secretary FCC, from Joseph A. Godles, Attorney for PanAmSat Corp., dated August 11, 2000.

<sup>7</sup> PanAmSat Application, Table 2 and Section 3.1 in Exhibits 1-6.

<sup>8</sup> PanAmSat Application, Exhibits 1-6 at Section 4.4.

<sup>9</sup> Partial Petition to Deny of TRW, Inc., Filed May 21, 1999 at 7.

<sup>10</sup> Consolidated Opposition of Lockheed Martin Corporation, Filed June 11, 1999 at 32.

### III. DISCUSSION

#### A. Qualifications

6. All applicants requesting authority to launch and operate satellite space stations must present information sufficient to establish their legal, technical, and financial qualifications to hold a Commission license. The rules set forth in Part 25 of the Commission's rules govern fixed-satellite service ("FSS") applicants and licensees, including this application for GSO FSS in the Ka-band frequencies. The Commission modified the Part 25 FSS rules in 1997 to incorporate the particular technical requirements for operations in the Ka-band frequencies.<sup>11</sup> In this and other licenses issued to Second Round FSS applicants in the Ka-band, we will generally apply all Part 25 FSS rules, specifically noting, however, where we decide not to apply existing rules.

##### 1. Number of Orbit Locations

7. The Commission's Part 25 FSS rules include a limit on the number of orbit locations that may initially be assigned to a qualified GSO FSS applicant.<sup>12</sup> The rules also limit the number of additional, expansion orbit locations that may be assigned to applicants with previously licensed systems using the same frequency bands.<sup>13</sup> Generally, the Commission may grant a waiver of its rules in a particular case only if the relief requested would not undermine the policy objective of the rule in question, and would otherwise serve the public interest.<sup>14</sup> The Commission waived the assignment limit rules in the first Ka-Band GSO FSS round because the applicants had agreed to an arrangement that accommodated all pending applications for space stations and left room for additional assignments.<sup>15</sup> In this Second Round, we have determined that we can also accommodate all pending requests for space stations with room for additional entry. We therefore again waive application of the Commission rule limiting GSO FSS orbit locations.<sup>16</sup> Consequently, we will not, as some applicants request, limit the number of assignments to Second Round applicants. The comments of TRW Inc. and Lockheed Martin Corporation regarding limiting the number of orbital assignments to PanAmSat are therefore moot.

##### 2. Technical Qualifications

8. Applicants for FSS space station authorizations must meet the technical qualification requirements set forth in the Commission's Part 25 rules. These requirements are designed primarily to implement two-degree orbital spacing between GSO FSS satellites. The Commission's two-degree spacing policy, which was established in 1983, was designed to maximize the number of satellites in orbit by ensuring that satellites in geostationary-satellite orbit can operate without causing harmful interference

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<sup>11</sup> *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services ("Ka-Band FSS Rules Order")*, 12 FCC Rcd 22310 (1997); *Memorandum Opinion and Order*, FCC 01-172 (rel. May 25, 2001) (order on petitions for clarification or reconsideration).

<sup>12</sup> 47 C.F.R. § 25.140(e).

<sup>13</sup> 47 C.F.R. § 25.140(f).

<sup>14</sup> *WAIT Radio v. FCC*, 418 F.2d 1153, 1157 (D.C. Cir. 1969).

<sup>15</sup> *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22320, ¶ 24.

<sup>16</sup> For a more detailed discussion, see *Second Round GSO Assignment Order* at ¶ 17.

to other GSO satellites located as close as two degrees.<sup>17</sup>

9. In the *Ka-Band FSS Rules Order*, the Commission adopted its proposal to extend its two-degree spacing policy between in-orbit satellites to space stations in the Ka-band.<sup>18</sup> We believe that it remains in the public interest to maximize the number of satellites that can be accommodated in orbit by extending the Commission's existing two-degree GSO spacing policy to Ka-band orbital assignments in the Second Round. All GSO FSS licensees in the Second Round will therefore be required to be two-degree GSO spacing compliant.

10. PanAmSat indicates that its system design is consistent with operation in a two-degree spacing environment.<sup>19</sup> Our review of PanAmSat's application finds nothing to preclude operation in a two-degree spacing environment. The Second Round Ka-band applications were received subsequent to the *Ka-Band FSS Rules Order* but prior to the *18 GHz Band Report and Order*.<sup>20</sup> In both orders, rules affecting two-degree orbital spacing were adopted. We remind PanAmSat of its continuing obligation to meet all Part 25 rules governing system operations, including Sections 25.202 (frequencies, frequency tolerance, and emission limitations), and 25.210 (technical requirements for space stations in the Fixed Satellite Service).<sup>21</sup> Further, PanAmSat must meet the current Ka-band power flux-density ("PFD") limit of Sections 2.106 US255 and 25.208, which were adopted after PanAmSat filed its application.<sup>22</sup> As a condition of this authorization, PanAmSat must meet these revised PFD limits.

### 3. Financial Qualifications

11. The Commission's FSS rules require that an applicant for a new fixed-satellite system possess sufficient financial resources to cover the construction, launch, and first-year operating costs of each proposed satellite.<sup>23</sup> We have waived these rules, however, in those cases where we can accommodate all pending applications. The Commission's financial qualification rules are designed to prevent under-capitalized licensees from holding valuable orbit spectrum resources to the exclusion of others while they attempt to arrange financing to construct and launch the licensed system.<sup>24</sup> Where all applicants can be accommodated, however, granting a license to an under-capitalized applicant will not prevent another applicant from going forward.<sup>25</sup> In addition, there is a pro-competition public interest benefit in licensing all applicants, if possible. We waived the financial qualification rules for the First

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<sup>17</sup> *Licensing of Space Stations in the Domestic Fixed-Satellite Service*, 54 Rad. Reg. 2d (P&F) 577, 589 (1983) ("*Two-Degree Spacing Order*").

<sup>18</sup> *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22320, ¶ 23.

<sup>19</sup> PanAmSat Application, Section 7.1 in Exhibits 1-6.

<sup>20</sup> *Redesignation of the 17.7-19.7 GHz Frequency Band, Blanket Licensing of Satellite Earth Stations in the 17.7-20.2 GHz and 27.5-30.0 GHz Frequency Bands, and the Allocation of Additional Spectrum in the 17.3-17.8 GHz and 24.75-25.25 GHz Frequency Bands for Broadcast Satellite-Service Use*, FCC 00-212, 15 FCC Rcd 13430 (2000) ("*18 GHz Band Report and Order*").

<sup>21</sup> 47 C.F.R. §§ 25.202 and 25.210.

<sup>22</sup> 47 C.F.R. §§ 2.106 US255 and 25.208.

<sup>23</sup> 47 C.F.R. § 25.140(b)-(e).

<sup>24</sup> See generally *Amendment of the Commission's Rules to Establish Rules and Policies Pertaining to a Mobile Satellite Service in the 1610-1626/2483.5-2500 MHz Frequency Bands, Report and Order*, 9 FCC Rcd 5936, 5948 ¶ 26 (1994) ("*Big LEO Report and Order*").

<sup>25</sup> *Id.*

Round applicants because all of those applicants could be accommodated in the available orbital locations and there were additional orbital locations available for future entrants.<sup>26</sup> In the accompanying *Second Round GSO Assignment Order*, we also determine that we can accommodate all pending Second Round applicants' requests for FSS space stations in the Ka-band, and still have some orbital locations available for future entrants. We therefore waive the financial qualification requirements for Second Round applicants. Consequently, it is unnecessary to rule on PanAmSat's financial qualifications.

## B. Spectrum Assignments

### 1. Service Links

12. In the *28 GHz Band First Report and Order*, the Commission adopted a band segmentation plan that designated one gigahertz of spectrum in each transmission direction for GSO FSS Ka-band systems.<sup>27</sup> For uplink (Earth-to-space) transmissions, the Commission designated 250 megahertz of spectrum between 28.35 and 28.6 GHz, 250 megahertz of spectrum between 29.25 and 29.5 GHz (shared on a co-primary basis with non-geostationary-satellite orbit, mobile satellite service feeder links), and 500 megahertz of spectrum between 29.5 and 30.0 GHz for GSO FSS operations. For downlink (space-to-Earth) communications, the Commission designated 1100 megahertz of spectrum between 17.7 and 18.8 GHz for GSO FSS operations (shared on a co-primary basis with terrestrial fixed-service) and 500 megahertz of spectrum between 19.7 and 20.2 GHz for primary GSO FSS operations. The Commission later refined the downlink plan for the frequency band between 17.7 and 18.8 GHz, by designating 280 megahertz of spectrum between 18.3 and 18.58 GHz for co-primary GSO FSS and terrestrial-fixed operations and 220 megahertz of spectrum between 18.58 and 18.8 GHz for primary GSO FSS operations.<sup>28</sup>

13. In its application, PanAmSat proposes to use 720 megahertz of spectrum at the 28.355-28.595 GHz and 29.510-30.29.990 GHz frequency bands for its service uplinks.<sup>29</sup> PanAmSat's request is consistent with the 28 GHz band plan, and we will therefore authorize PanAmSat to operate in these frequencies, subject to the sharing rules adopted in the *28 GHz Band First Report and Order*.

14. In its application, PanAmSat proposes to use 720 megahertz of spectrum at the 18.555-18.795 GHz and 19.710-20.190 GHz frequency bands for its service downlink bands.<sup>30</sup> We grant this request consistent with the 18 GHz band plan.<sup>31</sup> Specifically, we authorize PanAmSat to operate its service downlinks in 720 megahertz of spectrum in the 18.555-18.795 GHz and 19.710-20.190 GHz frequency bands. Because the 280 megahertz of spectrum at 18.3-18.58 GHz is to be shared on a co-primary basis

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<sup>26</sup> See *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22318, ¶ 18.

<sup>27</sup> *Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, First Report and Order and Fourth Notice of Proposed Rulemaking*, 11 FCC Rcd 19005 (1996) ("*28 GHz Band First Report and Order*").

<sup>28</sup> *18 GHz Band Report and Order*, 15 FCC Rcd 13430. Stations operating in primary services are protected against interference from stations of "secondary" services. Moreover, stations operating in a secondary service cannot claim protection from harmful interference from stations of a primary service. "Co-Primary" services have equal rights to operate in particular frequencies. See 47 C.F.R. §§ 2.104(d) and 2.105(c).

<sup>29</sup> *PanAmSat Application*, Exhibits 1-6, Table 2.

<sup>30</sup> *Id.*

<sup>31</sup> See *28 GHz Band First Report and Order*, 11 FCC Rcd 19005, as modified in *18 GHz Band Report and Order*, 15 FCC Rcd at 13443, ¶ 28.

with terrestrial fixed-services, GSO FSS operations in this band must be coordinated with these terrestrial operations.

15. In addition, PanAmSat must coordinate with U.S. Government systems in accordance with footnote US334 to the Table of Frequency Allocations.<sup>32</sup> This footnote requires coordination of commercial systems with U.S. Government GSO and NGSO FSS systems that are presently operating throughout the 17.8-20.2 GHz frequency band. These Government systems operate in accordance with the power flux-density limits contained in the current International Telecommunication Union ("ITU") Radio Regulations.<sup>33</sup> PanAmSat must also comply with footnote US255 to the Table of Frequency Allocations that contains power flux-density limits to protect the Earth exploration satellite service (passive) for the 18.6-18.8 GHz band.<sup>34</sup>

## 2. Inter-Satellite Links

16. PanAmSat plans to equip its satellites with inter-satellite links ("ISLs") between adjacent satellites to provide connectivity between coverage regions of different satellite orbit locations.<sup>35</sup> PanAmSat's proposed satellite system will consist of six geostationary earth orbit satellites located at the 133° W.L., 58° W.L., 45° W.L., 68.5° E.L., 72.7° E.L., and 169° E.L. orbital locations. Each satellite will be inter-connected to two adjacent satellites.<sup>36</sup> Therefore, each satellite will require two inter-satellite transmit channels and two inter-satellite receive channels, a total of four channels. Each channel will require a bandwidth of 1000 megahertz of spectrum to support at a data rate as high as 1.0 Gbps using QPSK modulation with forward error correction.<sup>37</sup> Thus, each satellite will require a total of 4000 megahertz of spectrum for its ISLs. With the use of dual polarization, each satellite within the system will be capable of re-using the same spectrum. The use of ISLs will provide direct satellite-to-satellite communication, thereby avoiding the need for double-hop connectivity and increasing system level reliability.

17. PanAmSat proposes to use 4000 megahertz of spectrum within the 54.25-58.20 GHz band and the 65.0-71.0 GHz band for ISL communication.<sup>38</sup> Based on PanAmSat's representations, we find that it has demonstrated a need for 4000 megahertz of ISL spectrum. Sharing studies done by the first-

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<sup>32</sup> See 47 C.F.R. § 2.106 US334.

<sup>33</sup> See *18 GHz Report and Order*, 15 FCC Rcd at 13473, ¶ 90. The power flux-density limits in the 18.3-18.6 GHz band are -115/-105 dB (W/m<sup>2</sup>) in any one megahertz band, depending upon the angle of arrival. There are currently no power flux-density limits in the 19.7-20.2 GHz band. See Letter from William T. Hatch, National Telecommunications and Information Administration, to Dale Hatfield, Chief, Office of Engineering and Technology, Federal Communications Commission (March 29, 2000).

<sup>34</sup> 47 C.F.R. § 2.106 US255 (as revised in the *18 GHz Band Report and Order*, 15 FCC Rcd at 13489) states: In addition to any other applicable limits, the power flux-density across the 200 MHz band 18.6-18.8 GHz produced at the surface of the Earth by emissions from a space station under assumed free-space propagation conditions shall not exceed -95db(W/m2) for all angles of arrival. This limit may be exceeded by up to 3 dB for no more than 5% of the time.

<sup>35</sup> ISLs are communication links between in-orbit satellites. ISLs operate in spectrum allocated to the inter-satellite service. See International Telecommunication Union Radio Regulation S1.22.

<sup>36</sup> See Letter to Magalie Roman Salas, Secretary FCC, from Joseph Godles, Counsel for PanAmSat, dated July 6, 2001 at p. 3

<sup>37</sup> *Id.*

<sup>38</sup> *Id.* at p. 4.

round Ka-Band licensees concluded that those applicants could share the ISL spectrum with minimal constraints. We expect the same conclusion to be reached by Second Round applicants.<sup>39</sup> Consequently, we will authorize PanAmSat to conduct ISL operations in 4000 MHz of spectrum within the 54.25-58.20 GHz band and the 65.0-71.0 GHz band subject to coordination with the First and Second Round ISL licensees, and with U.S. Government (non-ISL) operations through National Telecommunications and Information Administration's Interdepartment Radio Advisory Committee's Frequency Assignment Subcommittee. Within 30 days of the release of this Order, PanAmSat must inform the Commission which specific spectrum it has chosen for its ISL operations.

### 3. Tracking, Telemetry and Command

18. Under the Commission's rules, tracking, telemetry and command ("TT&C") operations may be provided in the frequency bands in which the particular satellite will be providing service.<sup>40</sup> PanAmSat proposes to conduct its TT&C operations in the extended C-band frequencies, which are not the system's service band.<sup>41</sup> Thus, PanAmSat's request is not consistent with Section 25.202 of the rules.<sup>42</sup> As the Commission recently indicated, the rule serves the important valid public purpose of simplifying coordination among satellites at adjacent orbital locations, and promoting efficient spectrum use.<sup>43</sup> PanAmSat has not provided a showing to demonstrate that a waiver of Section 25.202(g) for TT&C operations outside its service band would be consistent with the basic purpose of the rule, or that the public interest otherwise requires a waiver.<sup>44</sup> Thus we deny PanAmSat's request.

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<sup>39</sup> For a detailed discussion of spectrum available for ISL operations, see *Amendment of Part 2 of the Commission's Rules to Allocate Additional Spectrum to the Inter-Satellite, Fixed, and Mobile Services*, ET Docket No. 99-261, *Report and Order*, FCC 00-442, at ¶ 45 (rel. Dec. 22, 2000).

<sup>40</sup> 47 C.F.R. § 25.202(g).

<sup>41</sup> In its application PanAmSat notes that several operators have petitioned the Commission to use 10 megahertz of spectrum in the extended C-band for Ka-band TT&C functions and that it supports this recommendation and will conform its application to the Commission's decision on this issue. *PanAmSat Application*, Section 4.3 at Exhibits 1-6. The Commission has proposed to modify Section 25.202 to permit TT&C operations in the 3.65-3.7 GHz frequencies, if the applicant makes a "particularized showing of need." Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd 20488, 20539 (2000). The Commission specifically sought comment on the types of showings that would warrant such an authorization. *Id.* PanAmSat made no such showing.

<sup>42</sup> See Amendment of the Commission's Rules with Regard to the 3650-3700 MHz Government Transfer Band, *First Report and Order and Second Notice of Proposed Rulemaking*, 15 FCC Rcd at 20538 ¶ 129 (the rule "effectively limits FSS operators to operating TT&C links in the same frequency bands as their FSS operations").

<sup>43</sup> *Id.* at ¶¶ 129-130.

<sup>44</sup> Although PanAmSat does not specify the specific frequencies it proposes to use, we note that the 3400-3600 MHz band is not available in the United States or its possessions for fixed-satellite service operations. See Letter to Donald Abelson, Chief, International Bureau from William T. Hatch, Assoc. Administrator, Office of Spectrum Management, NTIA, dated May 22, 2000. In addition, PanAmSat should be aware that there are potential allocation and electromagnetic compatibility issues in the 5850-5925 MHz band, therefore the band may not be available to support its TT&C requirements. 47 C.F.R. § 2.106 US245; NTIA Report 83-115, Spectrum Resource Assessment in the 5650-5925 MHz band, and FCC 77-349, 42 FR 27756 (rel. May 23, 1977) (which includes a discussion of the sharing issues between the radiolocation and fixed-satellite service operations in the 5850-5925 MHz band).

### C. Regulatory Treatment

19. In the *DISCO I Order*, the Commission determined that all fixed-satellite service operators in the C-band and Ku-band could elect to operate on a common carrier or non-common carrier basis.<sup>45</sup> The Commission extended this treatment to satellite operators in the Ka-band in the *Ka-Band FSS Rules Order*.<sup>46</sup> Consequently, Second Round Ka-band applicants may elect their regulatory status. PanAmSat states it will market its transponders on a non-common carrier basis. PanAmSat also states it will retain the flexibility to market transponders to common carriers and resellers and that although common carrier services may be offered using its transponders, they will not be offered by PanAmSat.<sup>47</sup> We authorize PanAmSat to operate on a non-common carrier basis.

### D. License Conditions

#### 1. Milestone Schedule

20. As in all other satellite services, all Second Round Ka-band licensees will be required to adhere to a strict timetable for system implementation. This ensures that licensees are building their systems in a timely manner and that the orbit-spectrum resource is not being held by licensees unable or unwilling to proceed with their plans. The implementation schedules for GSO FSS systems in the Ka-band will generally track the schedules imposed in other satellite services.

21. Specifically, Section 25.145(f) of the Commission's rules requires Ka-band GSO FSS licensees "[1] to begin construction of [their] first satellite within one year of grant, [2] to begin construction of the remainder within two years of grant, [3] to launch at least one satellite into each of [their] assigned orbit locations within five years of grant, and [4] to launch the remainder of [their] satellites by the date required by the International Telecommunication Union to assure international recognition and protection of those satellites."<sup>48</sup> Failure to meet any of these construction milestones will render those satellite authorizations null and void without further action by the Commission.

22. The dates by which PanAmSat's satellites must be "brought into use" to protect the date priority of the U.S. ITU filings for its service links at these orbital locations are in March 2003 - with a two year extension available under certain circumstances, and July 2005.<sup>49</sup> We recognize that, in this

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<sup>45</sup> See *In the Matter of Amendment to the Commission's Regulatory Policies Governing Domestic Fixed Satellites and Separate International Satellite Systems and DBSC Petition for Declaratory Rulemaking Regarding the Use of Transponders to Provide International DBS Service*, 11 FCC Rcd 2429, 2436 (1996) (*DISCO I Order*).

<sup>46</sup> *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22333, ¶¶ 58-60.

<sup>47</sup> *PanAmSat Application* at 3.

<sup>48</sup> 47 C.F.R. § 25.145(f). See also *Ka-Band FSS Rules Order*, 12 FCC Rcd at 22334-35 ¶ 61 & n.77.

<sup>49</sup> Specifically, the satellite at 133° W.L. must be brought into use by March 9, 2003; the satellite at 58° W.L. must be brought into use by July 2, 2005; the satellites at 45° W.L. and 68.5° E.L. must be brought into use by July 23, 2005; and the satellites at 72.7° E.L. and 166° E.L. must be brought into use by July 30, 2005. With regard to the 133° W.L. orbital location, ITU Radio Regulations require that the satellite be "brought-into-use" (BIU) no later than five years after ITU receipt of advance publication information. (ITU Radio Regulations Article S11.44). The ITU may extend the BIU date by two years under the conditions specified in ITU Radio Regulations Articles S11.44B through S11.44I (launch failure; launch delays due to circumstances outside the control of the administration or operator; delays caused by modifications of satellite design necessary to reach coordination agreements; problems in meeting the satellite design specifications; delays in reaching coordination after a request for ITU Radiocommunication Bureau assistance; financial circumstances outside the control of the administration or operator; and force majeure). In cases where the two year extension is necessary, the licensee must inform the Commission, in writing, six months before the end of the five year period so that the Commission can timely inform

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case, comparing these ITU “bring into use” dates to our launch milestones has the incongruous result of our rules requiring PanAmSat to launch its satellites into each of its assigned orbit locations by August 2006, *i.e.*, after the date PanAmSat is required to bring its satellite locations into use to protect the date priority of the U.S. ITU filings for its orbital locations. To address this misalignment, we require PanAmSat to launch its satellites into each licensed orbit location and “bring into use” all of the frequency assignments it plans to operate at that orbit location by the ITU “bringing into use” dates. Should the ITU grant a two year extension of the March 2003 bring into use date, the launch milestone in this license will automatically change to the revised bring into use date without further Commission action. This will protect the United States filings at these locations and thus, PanAmSat’s ability to coordinate and gain international recognition for the satellites at each of its assigned orbit locations. Moreover, we do not anticipate that meeting this milestone will be unduly difficult. Under standard industry practice, it generally takes two to three years to construct and launch a satellite.<sup>50</sup> PanAmSat will have nearly four years in which to launch five of its satellites into their assigned locations by the ITU “bringing into use” dates, and four years for its remaining satellite assuming it receives an extension.

## 2. Reporting Requirements

23. We will follow the Part 25 rules for reporting requirements for FSS systems, including an annual report describing the status of satellite construction and anticipated launch dates, and a detailed description of the use made of each transponder on each of the in-orbit satellites.<sup>51</sup> PanAmSat must file this report on June 30 of each year, containing information current as of May 31 of that year.

## 3. International Coordination

24. In general, we will follow the applicable advance-publication, coordination, and notification procedures as set forth in the ITU Radio Regulations in coordinating PanAmSat’s satellites with other affected administrations. We will also require that PanAmSat provide the Commission with the international coordination information required by our rules.<sup>52</sup> The orbit locations assigned today may be co-located or within two degrees of a non-U.S. licensed satellite filing having date priority in its ITU filings. Under these circumstances, U.S. licensees assigned to these locations are reminded that they take these licenses subject to the outcome of the international coordination process, and that the Commission is not responsible for the success or failure of the required international coordination. Further, the

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the ITU of the extension request. Should PanAmSat indeed wish to extend its milestone at the 133° W.L. orbital location to 2005, it must provide the Commission, six months before March 9, 2003, information demonstrating good cause to request an ITU extension on the grounds specified in the ITU Radio Regulations. Should the ITU grant a two-year extension of this date, the launch milestone in this license will automatically change to the new ITU bringing into use date without further Commission action. As to PanAmSat’s remaining orbital location assignments, ITU Radio Regulations require that these satellites be brought into use no later than nine years from the date the ITU publishes the advance publication information. The ITU initially required that these locations be brought into use within six years after receipt of their advance publication information, with an option to extend that date by an additional three years upon request. Since WRC 2000, satellite networks at orbit locations whose advance publication information was received by the ITU before November 22, 1997 have been automatically granted the optional three year extension. Because five orbit locations assigned to PanAmSat fall in this category, its July 2005 bring into use dates cannot be further extended.

<sup>50</sup> See, *e.g.*, *In the Matter of the Application of Comsat Corp.*, 12 FCC Rcd 12059, 12075 ¶ 33 n. 68 (1997) (“It has been our experience that it takes an average of two years to construct and launch a satellite....”).

<sup>51</sup> See 47 C.F.R. § 25.210(1)(1)(2)(3).

<sup>52</sup> See 47 C.F.R. § 25.111(b).

Commission has negotiated operating arrangements with a Japanese operator pursuant to a coordination agreement with the administration of Japan for one of the orbital locations assigned to PanAmSat in this proceeding.<sup>53</sup> PanAmSat is required to operate its satellite at this location in a manner consistent with these arrangements.

#### IV. CONCLUSION

25. Upon review of PanAmSat's application, we find that PanAmSat is qualified to be a Commission licensee and that, pursuant to Section 309 of the Communications Act of 1934, as amended, 47 U.S.C. §309, grant of this application will serve the public interest, convenience, and necessity. As specified in the *Second Round GSO Assignment Order*, we have assigned PanAmSat to the 133° W.L., 58° W.L., 45° W.L., 68.5° E.L., 72.7° E.L. and 166° E.L. orbital locations.

#### V. ORDERING CLAUSES

26. IT IS ORDERED that Application File Nos. SAT-LOA-19971222-00223; 00224; 00225; 00226; 00227; 00228 ARE GRANTED IN PART, as discussed above, and PanAmSat Corporation IS AUTHORIZED to launch and operate six GSO FSS satellites, to provide fixed-satellite service in the 18.3-18.8, 19.7-20.2, 28.35-28.6, and 29.25-30.0 GHz frequency bands at the 133° W.L., 58° W.L., 45° W.L., 68.5° E.L., 72.7° E.L. and 166° E.L. orbital locations.

27. IT IS FURTHER ORDERED that PanAmSat Corporation's authorization shall become NULL and VOID with no further action on the Commission's part in the event the space station is not constructed, launched, and placed into operation in accordance with the technical parameters and terms and conditions of the authorization by the following dates:

<u>Construction Commenced</u>		<u>Launch and Operate</u>	
First satellite	August 2002	133° W.L. Orbit Location	March 9, 2003 <sup>54</sup>
Remaining satellites	August 2003	58° W.L. Orbit Location	July 2, 2005
		45° W.L. Orbit Location	July 23, 2005
		68.5° E.L. Orbit Location	July 23, 2005
		72.7° E.L. Orbit Location	July 30, 2005
		166° E.L. Orbit Location	July 30, 2005

28. IT IS FURTHER ORDERED that PanAmSat Corporation must coordinate its Ka-band downlink operations with U.S. Government systems, including Government operations to earth stations in foreign countries, in accordance with footnote US334 to the Table of Frequency Allocations, 47 C.F.R. § 2.106, and in accordance with the *18 GHz Report and Order*, 15 FCC Rcd at 13473 ¶ 90.

29. IT IS FURTHER ORDERED that PanAmSat Corporation must inform the Commission which specific spectrum it has chosen for ISL operations, in either the 54.25-58.20 GHz or 65-71.0 GHz band, within 30 days from the date of the release of this Order and Authorization, and must coordinate its inter-satellite link operations in its chosen band through the National Telecommunications and Information Administration's Interdepartment Radio Advisory Committee's Frequency Assignment

<sup>53</sup> In particular, operating arrangements between the U.S. Ka-band satellite network at 72.7° E.L. and the Ka-band portion of the DRTS-W, DRTS-90.75E and DRTS-91E satellite networks at 90° E.L., 90.75° E.L. and 91° E.L., respectively, have been negotiated with the Japanese operator at its request. A copy of the relevant portions of these arrangements is available to the Licensee upon request.

<sup>54</sup> If the International Telecommunication Union grants a two-year extension of this date, this milestone will automatically change to March 9, 2005 without further Commission action.

Subcommittee. PanAmSat Corporation must also coordinate its inter-satellite link operations with all other licensed non-government inter-satellite link operations in its chosen bands.

30. IT IS FURTHER ORDERED that the license term for each space station is ten years and will begin to run on the date PanAmSat Corporation certifies to the Commission that the authorized satellite has been successfully placed into orbit and the operations fully conform to the terms and conditions of this authorization.

31. IT IS FURTHER ORDERED that PanAmSat Corporation will prepare any necessary submissions to the International Telecommunication Union and to affected administrations for the completion of the appropriate coordination and notification obligations for these space stations in accordance with the International Telecommunication Union Radio Regulations. We also remind PanAmSat Corporation that no protection from interference caused by radio stations authorized by other Administrations is guaranteed unless coordination procedures are timely completed or, with respect to individual administrations, by successfully completing coordination agreements. Any radio station authorization for which coordination has not been completed may be subject to additional terms and conditions as required to effect coordination of the frequency assignments of other Administrations, 47 C.F.R. § 25.111(b). Further, PanAmSat Corporation must operate its satellites in accordance with any international coordination agreements already in existence.

32. IT IS FURTHER ORDERED that the temporary assignment of any orbital location to PanAmSat Corporation is subject to change by summary order of the Commission on 30 days notice and does not confer any permanent right to use the orbit and spectrum. Neither this authorization nor any right granted by this authorization, shall be transferred, assigned or disposed of in any manner, voluntarily or involuntarily, or by transfer of control of any corporation holding this authorization, to any person except upon application to the Commission and upon a finding by the Commission that the public interest, convenience and necessity will be served thereby.

33. IT IS FURTHER ORDERED that PanAmSat Corporation shall conduct its operations pursuant to this authorization in a manner consistent with the power flux-density requirements of 47 C.F.R. § 2.106 US255 and 47 C.F.R. § 25.208 of the Commission's Rules.

34. IT IS FURTHER ORDERED that PanAmSat Corporation is afforded thirty days from the date of the release of this order and authorization to decline this authorization as conditioned. Failure to respond within that period will constitute formal acceptance of the authorization as conditioned.

35. This Order is issued pursuant to Section 0.261 of the Commission's rules on delegations of authority, 47 C.F.R. § 0.261, and is effective upon release. Petitions for reconsideration under Section 1.106 or applications for review under Section 1.115 of the Commission's rules, 47 C.F.R. §§ 1.106, 1.115, may be filed within 30 days of the date of public notice of this Order (*see* 47 C.F.R. § 1.4(b)(2)).

FEDERAL COMMUNICATIONS COMMISSION

Donald Abelson  
Chief, International Bureau